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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,059	06/06/2002	Takashi Nakagawa	017661-0181	8753

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EXAMINER	
ZISKIND, ANNA Y	
ART UNIT	**PAPER NUMBER**
2611	

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/048,059	NAKAGAWA, TAKASHI	
	Examiner	Art Unit	
	Anna Ziskind	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☒ Claim(s) *4-7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 June 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2/12/04; 12/31/03; 12/19/02
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 1/25/02, 7/15/02, 12/9/02, 12/31/03, and 2/12/04 have been considered and made of record by the examiner.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "132" has been used to designate both the modulator and the local oscillator in Fig. 1. The local oscillator should be relabeled as "131". Next, the output of Mean Value Section (192) is labeled as "S7" in Fig. 4 and "S11" in Fig. 5. Finally, the D/A Conversion Section in Fig. 4 lacks a reference number and should be labeled with "194" to be consistent with the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement

Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: line 23 on Pg.10 should refer to mean transmission power value S11, not 11. Appropriate correction is required.

Claim Objections

Claims 1-3 are objected to because of the following informalities: in claim 1 (line 20, Pg. 22), the increase of the level attenuation amount should be claimed to be "in accordance with the degree to which" the value of the amplitude data is over the maximum. The change will make it clearer that the attenuation is counterbalancing the difference between the amplitude data and the maximum. Also, lines 21-22 on Pg. 22 refer to "the transmission amplifier," whereas earlier the component had been referred to as "the transmission amplification means." For the sake of clarity, the component should be consistently named throughout the claim. Finally, line 7 on Pg. 23 refers to a "level value," whereas there is insufficient antecedent basis for this reference. It could be changed to "amplitude data" to clarify the language.

Claims 4-7 are objected to because of the following informalities: line 6 on Pg. 24 should be corrected to say "transmission amplification means." Line 8 on Pg. 24 should refer to "transmission amplification means," not "electric power amplification means." Line 26 on Pg. 24 and line 2 on Pg. 25 should be corrected to say "variable attenuation means," not "valuable attenuation means." Next, line 7 on Pg. 25 should be corrected to refer to "comparative control means," not "comparison/control means." Lines 19 and 25 on Pg. 25 and line 3 on Pg. 26 should be corrected to refer to "movable stations," not "movable station." Finally on lines 21-22 on Pg. 25 and lines 5-6 on Pg. 26, the phrase "carrying out communication processing" should be removed, as it does not add any new limitations and is not clearly directed to a particular component.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5715526 (Weaver, Jr. et al.). Weaver teaches an apparatus to control transmission power in a mobile CDMA communication system, the apparatus

combining additively the amplitudes of all the data streams to be transmitted to arrive at the desired output power, or amplitude data (Fig. 3, reference 37; Col. 5, lines 56-67; Col. 6, lines 1-10). The invention of Weaver then passes the modulated data streams through variable attenuation means and transmission amplification means (Fig. 6, references 24 and 76; Col. 12, lines 6-15). The variable attenuation means in Weaver's design compares the desired output power (y_d), or amplitude data, with the actual output power (y), or predetermined maximum data, to determine the transmit power tracking gain (y') which controls the attenuation of the variable attenuation means (Fig. 3; Col. 7, lines 35-55; Col. 9, lines 45-54). The transmit power tracking gain is indicative of the degree to which the value of the amplitude data is over the maximum data.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5715526 (Weaver, Jr. et al.) in view of US Patent 5930242 (Mimura).

As to claim 2, Weaver teaches that the transmission channels include a pilot channel, a synchronization channel, which is a control channel, and a number of forward traffic channels, or call channels (Col. 2, lines 1-4). However, Weaver doesn't teach that the cell size is reduced by reducing the power of a pilot channel in accordance with increasing power of connection channels where the amplitude data is over the maximum value. Mimura teaches an apparatus that first compares the total transmitting power of all channels to a predetermined maximum and, if the power is over the maximum, decreases the transmitting power of a pilot signal (Fig. 2, references A-2 and A-3; Col. 5, lines 50-67). The decreased pilot signal power inherently decreases the cell size, because the radius over which the pilot signal power is acceptable is decreased (Col. 6, lines 8-14 and 38-46). Therefore, it would have been obvious to one of ordinary skill in the art to include the pilot power decrease taught by Mimura in the invention taught by Weaver. Doing so would improve system performance because the size of each cell would be customized to the number of communications taking place within the cell, thereby equalizing the load on the base station of every cell.

As to claim 3, Weaver doesn't teach that the amplitude data is compared to a threshold value that is larger than the maximum value when the amplitude data is larger than the maximum value. Mimura teaches comparing the total transmitting power, or amplitude data, to two thresholds, one larger

than the other, and reporting to a pilot signal transmitting power controller, or upper control device, when the transmitting power is larger than the largest of the thresholds (Fig. 2, references A-4 and A-5; Col. 6, lines 21-37). Although the order in which the amplitude data is compared to the two thresholds differs between the instant application and Mimura, the ultimate function is identical. Therefore, it would have been obvious to one of ordinary skill in the art to compare the amplitude data in the invention of Weaver to two thresholds in order to more appropriately scale the system response to the load on the transmitter.

Allowable Subject Matter

Claims 4-7 would be allowable if rewritten to overcome the outstanding objections. The following is a statement of reasons for the indication of allowable subject matter. A search of prior art failed to teach, either alone or in obvious combination, a signal transmission device including an additive composite means, a modulation means, a variable attenuation means, an amplification means, a transmission power inspecting means, a first mean value-calculating means, a second mean value-calculating means, a comparative control means, and all the claimed functions of the components.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Ziskind whose telephone number

is (571) 272-2769. The examiner can normally be reached on Mon. - Fri., 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anna Ziskind
Examiner
Art Unit 2611

AZ

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER